

BASIS FOR THE AMENDMENT

Claim 7 has been amended to make it clear that the light transmitting layer is adhered to an associated side of the information recording surface, consistent with Fig. 1 and the paragraph bridging pages 4 and 5 of the specification.

REMARKS

Favorable reconsideration of this application is requested.

Claims 7-21 are in the case.

Claims 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

The Examiner states that Applicant's amendment necessitated the following new grounds of rejection:

1. Claims 7, 9-12, 18, 19 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Yoshiaki et al. in view of Watanabe et al.

2. Claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Yoshiaki et al. in view of Watanabe further in view of Ueno et al.

The present invention relates to an optical information medium, comprising a supporting substrate, an information-recording surface provided on the supporting substrate and a light-transmitting layer provided on the information-recording surface, wherein:

the light-transmitting layer comprises a light-transmitting sheet formed of a resin and an adhesive layer containing pressure-sensitive adhesive for bonding the light-transmitting layer to an associated side of the information-recording surface; and

the light-transmitting sheet is formed of one resin selected from the group consisting

of polycarbonate, polyarylate and cyclic polyolefin.

Yoshiaki et al., the primary references relied upon by the Examiner in all of these rejections, is directed to a light transmission layer formed on an information recording layer on the main surface of a transparent substrate, the light transmission layer having dispersed therein ball-shaped spacial particles, such as glass particles. Such light-transmitting layer is neither two-layered. Further, light-transmitting layer, from the teaching of its abstract, does not appear to be a polycarbonate, polyarylate or cyclic polyolefin, as so specifically cited in the claims.

In order to cure these basic deficiencies of Yoshiaki et al. to make obvious the claimed invention, the Examiner relies on Watanabe et al. However, even if Watanabe et al. is combined with Yoshiaki et al., Applicants' discovery is not made obvious thereby. Even though the magneto-optical disc of Watanabe et al. may comprise a light-transmitting adhesive layer and a light-transmitting plate, nevertheless, no pressure-sensitive adhesive is disclosed by the reference for this purpose. As a matter of fact, as so specifically disclosed and claimed in this reference (note Column 12, lines 29-31), the light-transmitting adhesive layer is a photo-curable resin. No suggestion is present in Watanabe et al. for the adhesive layer being a pressure-sensitive adhesive layer. Thus, even combining Watanabe et al. with Yoshiaki et al., no *prima facie* case of obviousness is made out by the combination of these references.

Moreover, any possible *prima facie* case of obviousness is rebutted by the comparative evidence in the case. Note Table 1 at page 13 of the specification, reproduced below:

Yoshiaki
has
press

Table 1

Sample No.	Bonding Means	Material for Light-Transmitting Sheet	Light- Transmitting Sheet Making Process	Thickness Profile (μm)	Amount of warp (deg)	Double Refraction (nm)
1	Pressure-Sensitive Adhesive	polycarbonate	Casting	2	0.20	20
2	Pressure-Sensitive Adhesive	polycarbonate	Melt Extrusion	4	0.22	130
3 (comp.)	UV-Curing Adhesive	polycarbonate	Casting	14	0.72	40
4 (comp.)	UV-Curing Adhesive	polycarbonate	Melt Extrusion	18	0.75	200
5 (comp.)	UV-Curing Adhesive	—	—	25	Unmeasurable	10
6	Pressure-Sensitive Adhesive	Cyclic Polyolefin	Casting	3	0.24	15
7 (comp.)	UV-Curing Adhesive	Cyclic Polyolefin	Casting	17	0.65	25
8	Pressure-Sensitive Adhesive	Polyarylate	Casting	3	0.26	30
9 (comp.)	UV-Curing Adhesive	Polyarylate	Casting	20	0.68	40

As is evident from the results set forth in this table, by direct comparison with the closest prior art wherein the adhesive layer is a photo-curable resin layer, unobviously superior results obtained here.

Thus, by comparisons of No. 1 with No. 3, No. 2 with No. 4, No. 6 with No. 7 and No. 8 with No. 9, it is apparent that the uniformity, amount of warpage and index of double refraction of the light-transmitting layer are strikingly improved by bonding the light-transmitting sheet to the side of the supporting substrate using the adhesive layer. From a comparison of No. 1 with No. 2, it is also apparent that the increase in the birefringence of the polycarbonate sheet can be almost totally reduced by combining the polycarbonate sheet with the adhesive agent. Regarding the cyclic polyolefin sheet and polyarylate sheet, also, the index of double refraction can be strikingly reduced by preparing them by a casting process, as is the case with the polycarbonate sheet.

Further, the Examiner asserts that "the use of pressure sensitive adhesive in optical information mediums is not new". However, no reference has been cited by him to support this bare assertion. In the absence of any citation of prior art to this effect, such knowledge in the prior art is challenged, consistent with MPEP § 2144.03.

With regard to rejection 2., Ueno et al. is additionally relied upon by the Examiner. However, Ueno et al. is subject to the same deficiency as is Watanabe et al. Thus, at Column 5, lines 8-10 referred to by the Examiner, it is disclosed that:

...the protective plate 6 was formed by adhering the acrylic resin plate with an ultraviolet curing acrylic resin adhesive.

No pressure sensitive adhesive is disclosed by Ueno et al., thus clearly not making obvious the claimed invention even when considered in light of the teaching of this additional reference.

As to rejection 3., the Examiner relies on Hirai for its teaching that a light having

transmission substrate may be a polycarbonate or a polyarylate having a thickness of 0.1 to 10 mm. (Column 4, lines 41-55). However, even combining this teaching of Hirai with Yoshiaki et al., the claimed feature of the light-transmitting layer being bonded to an associate side of the supporting substrate by means of a pressure-sensitive adhesive layer manifestly is not obvious from the combination of these references, for reasons as pointed out above.

As to rejection 4., Tamura et al. is relied upon by the Examiner only for asserted obviousness of a subsidiary claimed feature. As such, it clearly does not remedy the inadequacies of the other references to make obvious Applicant's discovery.

It is submitted that all of the claims in the case, not only Claims 14-17 considered allowed by the Examiner, define a patentable invention. Their allowance is solicited.

Respectfully submitted,
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IN THE CLAIMS

7. (Amended) An optical information medium, comprising a supporting substrate, an information-recording surface provided on the supporting substrate and a light-transmitting layer provided on the information-recording surface, wherein:

the light-transmitting layer comprises a light-transmitting sheet formed of a resin and an adhesive layer containing pressure-sensitive adhesive for bonding the light-transmitting [sheet] layer to an associated side of the [supporting substrate] information-recording surface; and

the light-transmitting sheet is formed of one resin selected from the group consisting of polycarbonate, polyarylate and cyclic polyolefin.